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IN THE CLAIMS

Please cancel Claim 63, without prejudice, and amend Claims 1, 5, 10, 22, 38, 42, 49, 50, 53, 54, 62, 65 and 66 as follows:

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1. (Currently amended) A method of positioning a blood pressure sensor including locating a blood vessel disposed within surrounding tissue, comprising:

transmitting acoustic energy into said tissue including said blood vessel;

evaluating reflections of said acoustic energy from said tissue and said blood vessel,

10 identifying at least one region of reduced energy reflection within said tissue, said at least one region corresponding to said blood vessel,

said act of identifying comprising automatically detecting a local minimum indicative of both lateral position and depth; and

positioning said blood pressure sensor based at least in part on said act of ~~locating~~

15 identifying.

2. (Previously presented) The method of Claim 1, wherein said blood pressure sensor comprises a tonometric sensor, and said act of evaluating comprises analyzing at least one A-mode line.

3. (Original) The method of Claim 2, further comprising correlating said at least one 20 region to a depth location within said tissue based on said act of analyzing said at least one A-mode line.

4. (Previously presented) The method of Claim 2, wherein said act of identifying comprises:

forming at least one integrated power representation based on said reflections; and

25 identifying at least one artifact within said at least one integrated power representation, said at least one artifact corresponding to the lumen of said blood vessel.

5. (Currently amended) The method of Claim 4, wherein ~~the said~~ act of identifying at least one artifact comprises identifying at least one plateau within a normalized integrated power profile.